

AMENDMENTS TO THE CLAIMS

Listing of Claims

1. (Currently Amended) A method for configuring a gas distribution channel, said gas distribution channel being configured for introducing a plasma source gas into a plasma processing chamber of a plasma processing system, comprising:

providing a metal conduit;
providing a thermo-plastic tubular structure;
disposing said thermo-plastic tubular structure within said metal conduit;~~and~~
~~applying heat and pressure to said thermo-plastic tubular structure, thereby~~
~~causing said thermo-plastic tubular structure to mechanically couple with said metal~~
~~conduit wherein an outer surface of said thermo-plastic tubular structure is longitudinally~~
~~coupled with an inner surface of said metal conduit.~~

heating the metal conduit to a first temperature;
cooling the thermo-plastic tubular structure to a second temperature that is below
the melting point of thermo-plastic material of said thermo-plastic tubular structure; and
injecting a resin material between the metal conduit and the thermo-plastic tubular
structure after the cooling.

2. (original) The method of claim 1 further comprising configuring said gas distribution channel to enable a flow of said plasma processing source gas through said channel to be controlled by a mass flow controller of said plasma processing system.

3. (Currently Amended) The method of claim 1, wherein ~~said step of~~
~~providing a thermo-plastic tubular structure further includes coupling a resin material to~~
~~said outer surface~~ said resin material includes a set of thermoplastic polymers.

4. (Currently Amended) The method of claim 3, where said resin material ~~is applied to said outer surface by molding injection~~ includes a bonding agent.

- 5. (original) The method of claim 1, where said metal conduit is stainless steel.
- 6. (original) The method of claim 1, where said metal conduit is copper.
- 7. (original) The method of claim 1, where said metal conduit is aluminum.
- 8. (original) The method of claim 1, where said metal conduit is a metal alloy.
- 9. (original) The method of claim 1, where said thermo-plastic tubular structure is PTFE.
- 10. (original) The method of claim 1, where said thermo-plastic tubular structure is FEP.
- 11. (original) The method of claim 1, where said thermo-plastic tubular structure is PFA.
- 12. (original) The method of claim 1, where said thermo-plastic tubular structure is PCTFE.
- 13. (original) The method of claim 1, where said thermo-plastic tubular structure is CTFE.
- 14. (original) The method of claim 3, where said resin material is PTFE.
- 15. (original) The method of claim 3, where said resin material is FEP.
- 16. (original) The method of claim 3, where said resin material is PFA.
- 17. (original) The method of claim 3, where said resin material is PCTFE.
- 18. (original) The method of claim 3, where said resin material is CTFE.
- 19-48. (canceled).